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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/750,308

12/31/2003

Michael O'Connor

P16604

9709

28062 7590 02/07/2007
BUCKLEY, MASCHOFF, TALWALKAR LLC
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EXAMINER

MITCHELL, JAMES M

ART UNIT

PAPER NUMBER

2813

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
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3 MONTHS

02/07/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.		Applicant(s)	
	10/750,308		O'CONNOR ET AL.	
	Examiner		Art Unit	
	James M. Mitchell		2813	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 November 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3-10 and 16-29 is/are pending in the application.
- 4a) Of the above claim(s) 7-9 and 16-26 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) 1,3,4 and 27-29 is/are rejected.
- 7) ☐ Claim(s) 5,6 and 10 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This office action is in response to applicant's remarks filed November 20, 2006.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1, 4 and 27-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over in Sato et al. (U.S. 6,081,305) with Edelstein et al. (U.S. 2005/0121768) and Hosoda et al. (U.S. 2004/0084778).
4. Sato (Fig. 1a, 1b, 2, 5, 17, 18) discloses:
- (cl. 1, 27) a device comprising: a semiconductor substrate (110); a pixel cell array integrated (e.g. Fig. 2) with the semiconductor substrate; a liquid crystal layer (200) in contact with the pixel cell array (e.g. Fig. 2); a substantially transparent protective cover (300) coupled to the liquid crystal layer; and a base (500) coupled to the semiconductor substrate;
- (cl. 4, 28) a chip carrier (e.g. light device, 740 is not floating but connected/coupled to a carrier/ mounting surface via 550);
- (cont. cl. 27) an Ultra High Pressure light source to emit light (700; Fig. 18); a condenser lens (730) to condense the light; a display device (740) to receive the condensed light and to emit image light, the display device comprising: a projector lens (750) to project the image light.

(cl. 29) an electrode (302) disposed between the liquid crystal layer and the protective cover, wherein the protective cover is coupled to electrode (e.g. Fig. 2).

5. Sato further discloses its base and protective layer being ceramic and glass respectfully, but does not explicitly disclose that the thermal expansion characteristics of the base are substantially similar to thermal expansion characteristics of the protective cover.

6. However, Edelstein (Par. 0036) discloses glass and ceramic with similar CTE.

7. It would have been obvious to one of ordinary skill in the art at the time the invention was made to form the base and protective cover of similar CTE in order provide a type of ceramic material for its base and glass material for its protective cover as required by Sato¹.

8. Furthermore, Hosoda (Par. 0003) teaches that cracking in structures can occur due differences in the CTE of materials.

9. Hence, it would have been further obvious to one of ordinary skill in the art at the time the invention was made to form layers within the package of Sato with similar CTE to reduce cracks etc. caused by CTE mismatch as taught by Hosoda (Par. 0003).

10. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sato et al. (U.S. 6,081,305), Edelstein et al. (U.S. 2005/0121768) and Hosoda et al. (U.S.

¹ See also M.P.E.P §2144.07.

2004/0084778) as applied to claim 1 and further in combination with Huang et al. (U.S. 2005/0062167).

11. The modified structure of Sato further discloses that its base and cover have substantially the same thickness (Fig. 17), but it does not appear to explicitly disclose that its cover and base are of the same material.

12. However Sato discloses the same invention except that base/substrate is ceramic instead of glass, Huang (Par. 0003, 0030) recognizes the equivalency of either glass or ceramic for a substrate. Therefore, because these two materials are art recognized equivalents at the time the invention was made, one of ordinary skill in the art would have found it obvious to substitute a glass for ceramic to form a base/substrate .

13. Furthermore, since the selection of both ceramic and glass are known materials for substrates it would have been obvious to one of ordinary skill in the art at the time the invention was made to select either, since it has been held that the selection of a known material based on its suitability for its intended use supported a prima facie obviousness determination in *Sinclair & Carroll Co. v. Interchemical Corp.*, 325 U.S. 327, 65 USPQ 297 (1945). See M.P.E.P §2144.07.

Allowable Subject Matter

14. Claims 5, 6 and 10 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

15. Applicant's arguments with respect to claims have been considered but are moot in view of the new ground(s) of rejection.


Conclusion

16. Any inquiry concerning this communication or earlier communications from the examiner should be directed to James M. Mitchell whose telephone number is (571) 272-1931. The examiner can normally be reached on M-F 8:00-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Carl Whitehead Jr. can be reached on (571) 272-1702. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Ex. Mitchell, J.D.
February 1, 2007


CARL WHITEHEAD, JR.
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800